Document #346 Fliegel, Myron U.S. Nuclear Regulatory Commission

February 15, 2005

Donald R. Metzler
Moab Federal Project Director
U.S. Department of Energy
2597 B¾ Road
Grand Junction, CO 81503

SUBJECT: NRC's COMMENTS ON THE MOAB URANIUM MILL TAILINGS DRAFT ENVIRONMENTAL IMPACT STATEMENT

Dear Mr. Metzler:

By letter dated November 4, 2004, you transmitted a copy of the U.S. Department of Energy's (DOE's) *Remediation of the Moab Uranium Mill Tailings, Grand and San Juan Counties, Utah, Draft Environmental Impact Statement (DOE/EIS-0355D)* and requested U.S. Nuclear Regulatory Commission's (NRC) comments on the document. The Moab Project is the former Atlas Corporation uranium mill facility that held NRC license SUA-917 before being transferred to DOE in accordance with the Floyd D. Spence National Defense Authorization Act for FY 2001. We have completed our review of the Draft Environmental Impact Statement and our comments are enclosed. If you have any questions concerning the comments please contact me at (301) 415-6629 or by e-mail at mhf1@nrc.gov.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Sincerely,

/RA/

Myron H. Fliegel, Project Manager
Fuel Cycle Facilities Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Enclosure: NRC's Comments

Donald R. Metzler
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Enclosure: NRC Comments

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U.S. NUCLEAR REGULATORY COMMISSION COMMENTS
U.S. DEPARTMENT OF ENERGY DRAFT ENVIRONMENTAL IMPACT STATEMENT
REMEDIATION OF THE MOAB URANIUM MILL TAILINGS,
GRAND AND SAN JUAN COUNTIES, UTAH

1. Figure 2-1 shows summary schedules of activities for on-site and off-site disposal.

   a. The schedules show "Characterization/Design/Bidding" beginning as soon as the Record of Decision is issued. Does the U.S. Department of Energy (DOE) need an appropriation from Congress before it can begin those activities? If so, the time to obtain the appropriation should be factored into the schedules.

   b. "Characterization/Design/Bidding" is shown on the schedules as requiring 2 years to complete. There is no discussion in the text regarding the details of this phase. Presumably, DOE's preparation of the Remedial Action Plan (RAP) and the U.S. Nuclear Regulatory Commission's (NRC's) review and concurrence with it, are included in the 2 years. How long will it take DOE to prepare the RAP? How long does DOE expect it to take to obtain NRC's concurrence? Note that on many previous Title I projects, because of revisions needed as a result of NRC's initial review, it took longer than 2 years to obtain NRC's concurrence on the RAP.

   c. How long does DOE expect the site characterization portion of "Characterization/Design/Bidding" to take. Shouldn't there be a difference in the time required for characterization of licensed sites (Moab and White Mesa), with much existing data, and new sites (Crescent Junction and Klondike Flats)?

2. On p. 2-7, the Draft Environmental Impact Statement (DEIS) states, "DOE would also perform flood analyses at Courthouse Wash to determine the best alignment and design requirements." Is DOE considering realigning Courthouse Wash? If so, the EIS should provide the justification and discuss the impacts.

3. On p. 2-34, the DEIS discusses drying of tailings prior to truck or rail transport under off-site disposal options. The DEIS does not, however, discuss the potential for additional contamination to seep into the ground water from the drying tailings. Note that a significant fraction of the existing uranium contamination in the ground water at the site resulted from seepage from the ore stored onsite prior to its processing in the mill. Sections 4.2.3, 4.3.3, and 4.4.3 should address this potential impact.

4. On p. 2-114, DOE states that removing tailings to the Envirocare site" would require an amendment to the existing license from NRC..." Note that effective August 16, 2004, NRC transferred its authority with respect to Envirocare (and other 11e.(2) byproduct material facilities) in Utah to the State.

5. On p. 2-132, figure 2-58 shows latent cancer fatalities (LCFs) for workers for the various disposal options. For the on-site option, the figure shows LCFs to be much less than 0.1 for "Moab site workers" but also shows LCFs of almost 0.3 for "disposal site workers." What does that mean for on-site disposal, i.e., how are "disposal site workers" different than "Moab site workers" for the on-site disposal option? Additionally,

Enclosure

the LCFs for "disposal site workers" for off-site disposal options are about 0.4. However, disposal at Moab will involve putting relatively low activity soils in the pile and some moving of the contaminated material on the top of the pile, while disposal for the off-site options will involve handling all of the material including the most radioactive materials. The EIS needs to explain the counter-intuitive conclusion that the latter will result in LCFs that are only 25 percent higher than the former.

6. Tables 2-35 (p. 2-180) and 4-8 (p. 4-40) provide information on the costs of the various options. The costs are, presumably, DOE's best estimates, but there must be significant uncertainty in at least some of the estimates. It would be helpful if the uncertainties for the estimates were also provided. One would expect the uncertainties to vary by the component in Table 2-35 and by the site. For example, site characterization is shown to cost $1.6 million at all sites (the EIS should explain why the costs are estimated to be the same at Moab and White Mesa, where extensive site characterization data already exists, as at Klondike Flats and Crescent Junction, which have not yet been characterized). One would expect the uncertainty in site characterization costs to be greater at the sites that have relatively little site characterization data. As another example, one would expect the uncertainty in tailings handling costs to be greater for the off-site disposal options than for the stabilization in place option, since less is known about the deeply buried tailings that would have to be handled under the off-site disposal options.

7. On p. 4-10, the DEIS presents a discussion of potential impacts, with respect to potential ground water contamination, of a 100-year flood on the Colorado River. The DEIS estimates that as a result of flood water inundating the tailings pile during the flood, over 4 million gallons of contaminated water would drain from the pile at an average rate of 307 gallons per minute (gpm) over 10 days. No details of the analysis are provided.

   The DEIS needs to provide the technical basis for the estimates provided. First, there does not appear to be a mechanism to get that volume of river water into the pile. The side of the pile will be protected by a clay layer with a permeability of 10^{-6} cm/sec and the bottom of the pile, while not as impermeable, also has low permeability. The 1984 Colorado River flood, that is used as the model for the 100 year flood, only rose about 4 feet up the side of the tailings pile, so the head to drive water into the pile is not great. Additionally, estimates of leakage from the bottom of the pile during mill operations were somewhat above 100 gpm. At that time there was a full pool of water on the top of the pile, so the head driving the water seepage was much greater. It therefore seems unlikely that the pile can drain at a rate of 307 gpm.

8. On p. 4-12 the DEIS discusses storm water management. There is a brief statement that floods greater than the 25 year flood could result in tailings being carried into the Colorado River and that alternatives with site drying of tailings could result in more tailings being carried into the River. The same general statement is made for offsite disposal options (p. 4-64). In sharp contrast to the discussion in section 4.17 on disposal cell failure from natural phenomena, no details or analysis of the potential impacts to the River are provided. However, a storm or river flood overwhelming storm management features (which are only designed for a 25 year event) during construction and carrying tailings into the Colorado River is more credible than a catastrophic failure

of the stabilized cell putting 20 to 80 percent of the tailings into the river. Additionally, the consequences of an event beyond the design for storm water management are different for on-site and off-site disposal options. Under the on-site option, only small amounts of primarily the less-contaminated material would be available to be washed into the River, while for the off-site option larger amounts of material, including the most highly contaminated tailings, could be affected. The EIS should provide a detailed analysis of a failure of the storm water management system, including potential consequences and clean up costs.

9. On p. 4-33 the DEIS contains a discussion of the visual impact of the completed cell at the current site. It states that it does not meet BLM Class II objectives. However, on p. 4-25, the DEIS states that Grand County envisions future land use of the site (if tailings were removed) for low-density residences. The EIS discussion of visual impact should clarify that on-site stabilization would have less visual impact at the current site, than off-site disposal followed by residential construction.

10. On p. 4-42 and in table 4-10 the DEIS addresses radiation effects for the on-site disposal option and includes estimates of latent cancer fatality (LCF) risks to workers. The LCFs discussed in the text and shown in the table are the same as those in sections 4.2.15.1, 4.3.15.1, and 4.4.15.1 for workers at the Moab site for the three off-site disposal options. However, off-site disposal options involve significant handling of the most highly radioactive materials, while the on-site disposal option leaves those mostly undisturbed. The EIS needs to explain the apparently incongruous result that the LCF risks to workers handling mildly radioactive materials would be the same as the LCF risks to workers handling more radioactive material.

11. On pp. 4-50 and 4-51 the DEIS discusses a catastrophic release of tailings and identifies several processes, but it does not discuss in detail how the identified processes could actually lead to a catastrophic release. The processes identified are:

Flooding - the DEIS does not acknowledge that large Colorado River floods are not erosive near the pile because the Portal downstream of Moab controls flow for this stretch of the River. In the event of a large flood, the area near the pile would be in backwater. It is difficult to see how this type of event would result in a catastrophic release of tailings.

River Migration - the DEIS correctly points out that this would be a slow process, if indeed it were possible (evidence indicates that migration will take the River away from the pile). The DEIS correctly states that failure of long-term management would also have to occur to have a catastrophic release of tailings. Thus two processes, each very unlikely, would have to both occur to cause a catastrophic release of tailings.

Seismic Activity/Basin Settling - in order for this process to lead to a catastrophic release of tailings, there would also have to be a major flood soon after an unlikely seismic event or there would have to be a failure of long-term management. Thus two processes, each very unlikely, would have to both occur to cause a catastrophic release of tailings.

Cap erosion/failure - this is identified as resulting in slow release of contaminants, rather than a catastrophic release.

The EIS should therefore highlight the conclusion that a catastrophic release of tailings, while theoretically possible, does not seem credible.

12. On p. 4-54, table 4-18 indicates that the concentration of radium-226 in the suspended load in the Colorado River following a catastrophic release of 20 percent of the tailings would be 944 pCi/g and would be 3776 pCi/g following a catastrophic release of 80 percent of the tailings. However, on p.3-10, it is stated that the mean concentration of radium-226 in the tailings solids is 516 pCi/g. The EIS needs to explain this apparent inconsistency.

Document #351 Binyon, Jean Sierra Club, Utah Chapter

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#351, p1

February 15, 2005

Moab DEIS Comments
U.S. Department of Energy Grand Junction
2597 B3/4 Road
Grand Junction, CO 81503

Re: REMEDIATION OF THE MOAB URANIUM MILL TAILINGS,
GRAND AND SAN JUAN COUNTIES, UTAH
Draft Environmental Impact Statement, November 2004 (DOE/EIS-03550)

Enclosed are Comments on the Draft EIS submitted on behalf of the Utah Chapter Sierra Club. These same Comments may be e-mailed before the deadline of February 18, 2005.

The Preferred Alternatives which we advocate are to **Move** the Atlas Tailings pile and other contaminated materials to the **Grand Junction** Site by **Rail**. We further suggest that DOE select only those borrow materials sites which are north of the tailings pile.

Our Comments provide the reasons for selecting these alternatives.

We appreciate the opportunity to submit these comments and look forward to a favorable outcome with your issuance of the Final EIS on the Moab project.

Sincerely yours,

Jean Binyon
3057 East Coyote Court
Moab, UT 84532.

Comments on
REMEDIATION OF THE MOAB URANIUM MILL TAILINGS, GRAND AND SAN JUAN COUNTIES, UTAH
Draft Environmental Impact Statement, November 2004 (DOE/EIS-0355D)

GENERAL INFORMATION

Comments submitted to: moabcomments@gjo.doe.gov

Comments submitted by: Jean Binyon, 3057 East Coyote Ct., Moab, UT 84532.
E-mail address: binyon@binyon.us

Comments submitted on behalf of: Utah Chapter Sierra Club, as authorized by its Executive Committee, January 22, 2005. Address 2120 South 1300 East, Suite 204, Salt Lake City, UT 84106. . E-mail: utah.chapter@sierraclub.org. Website: http://www.utah.sierraclub.org/ Organized 1959. Representing 5,000 Sierra Club members statewide. Statement of Purpose: To explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment and to use all lawful means to carry out these objectives.

PREFERRED ALTERNATIVES

The Draft EIS does not recommend preferred alternatives. The Utah Chapter Sierra Club respectfully recommends that the Atlas tailings pile, other millsite debris and contaminated vicinity property soils be **moved** from the Moab site to the **Crescent Junction disposal site** by **rail**. We further suggest that the best borrow areas would be those six which are located **north** of the Moab site, in order to eliminate unnecessary tandem truck traffic in downtown Moab.

RATIONALE

The Cap-in-Place/On Site Alternative is not safe and/or suitable, for environmental, health, and socioeconomic reasons.

1) The Utah Chapter Sierra Club joins the following in urging that the tailings be moved:

1 Utah former Governor Olene Walker in concert with Governors of California, Nevada, Arizona, and New Mexico
2 Representative Jim Matheson, 2nd Congressional District of Utah
3 Utah State Legislature (2002 General Session SJR 12)
4 Utah Department of Environmental Quality
5 Grand County Council
6 City of Moab
7 Town of Castle Valley
8 The Times-Independent

Grand Canyon Trust
Nature Conservancy
Living Rivers
Southern Utah Wilderness Alliance
Colorado Plateau River Guides
Colorado Riverkeeper, an Affiliate of Waterkeepers Alliance
Utah Guides and Outfitters
Glen Canyon Group Sierra Club, and
The majority of residents giving oral comments at the DOE Public Hearing January 26, 2005.

2) Evidence offered by Dr. John Dohrenwend of the University of Arizona, questions the DOE's contention that the Colorado River is within a stable channel, and slowly migrating, if at all, southward and eastward, away from the tailings pile. Dr. Dohrenwend's studies show that the river's inner channel has, over the past 80 years, shifted closer to the pile and has become narrower and deeper. Indeed, according to recent letters to *The Times-Independent*, a dike or levee built by Atlas Minerals in the early '60's aided in the River's northward migration. From his extensive historical and current hydrologic and geologic studies, Dr. Dohrenwend concluded that the Moab site is not suitable for the long-term storage of the more than 11 million tons of hazardous waste.

3) Evidence offered by Dr. Kip Solomon of the University of Utah, questions the DOE's contention that ammonia and uranium could not travel underneath the riverbed into the Scott Matheson Wetlands Preserve. To the contrary, he found that contaminated water *is* moving under the river to the south bank. Dr. Solomon is quoted as saying, "The tailings pile is literally a house built on sand. . . . If you leave those tailings in place they will end up in the Colorado." (*The Times-Independent,* Thursday, May 27, 2004)

4) The Multi-Dimensional Streamflow Simulation model being developed by the U.S. Geological Survey raises questions about DOE's assumptions regarding the extent of the floodplains and the likelihood that above-bank flows would be "dissipated in the Matheson Wetlands Preserve." As presented to the Moab Tailings Stakeholders Group Meeting January 14, 2005, the model illustrates the great complexity of stream flow as it is affected by both natural and man-made variables. The risks associated with the unpredictability of flooding makes it imperative that the tailings be moved.

5) Point #10 of Table S-1--Catastrophic Floods focuses on the consequences of flooding for the Moab section of the river, probably understating the consequences for the 25-millions people and valuable agricultural production downstream. The Colorado River serves the entire southwestern United States and is of regional and international concern. A more adequate analysis of risks would look at the entire river system, from upstream reservoirs through Lakes Powell and Mead to the Gulf of Mexico. The value of a regional approach is obvious, as neither rivers nor groundwater respect state boundaries, and water is the limiting factor in the sustainability and even the survivability of most of the interstate region.

6) Since the collapse of the uranium mining and milling industry, the basis of Moab and Grand County's economy has been tourism. The Atlas tailings are located at the "doorway" to Moab. A comparison of two simulated views in Volume I of the Draft EIS can serve to illustrate the very positive result, visually, of moving the tailings. These views are found in *Figure 4-5* on page 4-33, and *Figure 4-9* on page 4-77. Although it will take many years and a great deal of temporary disruptions to move the tailings, their removal to higher and safer ground will clearly be of benefit to the County's socioeconomic wellbeing.

Costs

Most reviewers of the Draft EIS quote the costs figures given on page S-6 of the Summary document as conclusive, failing to recognize that these Surface Remediation Alternatives projections are only a part of the picture. The Ground Water Remediation costs (page S-9) will require appropriations regardless of the disposal and transportation alternatives chosen in the Final EIS. Vicinity property cleanup costs also enter the budget estimates.

Volume I provides details in 2003 dollars within a range of –15% to +30% beginning after the Record of Decision is issued. The Estimated Lifetime Cost of Analyzed Disposal Alternatives (Table 2-35 on page 2-180) shows a total cost of $248.8 million for the on-site alternative, not the $166 million often quoted in the Summary document. Included are costs beginning with site characterization through surveillance & maintenance, plus vicinity property cleanup and a contingency of 10%. The total cost of the alternative we have recommended—rail transportation to Crescent Junction, is estimated at $472.3 million, admittedly much greater.

We question the assumption that the timeframe for ground water remediation should be the same, namely 75-80 years, for all disposal alternatives. Given the continuing source of contamination which would conceivably exist with the Cap-in-Place alternative, it is likely that such remediation would require more than 80 years. Since no precedent exists for remediating a uranium mill tailings pile in a floodplain, both longterm risks and costs are more speculative than for remediation off-site. It should be noted that Table 4-8 Remediation Costs on page 4-40 does include greater annual costs for ground water and post-remediation costs for on-site versus off-site disposal--$942,000 versus $933,000.

Regarding timeframe, compared to DOE's responsibility for 200 to1000 years, the 7 to 10 years for surface remediation and 75 to 80 years for ground water remediation represent a sound investment in time. We would argue that the greater cost for the much safer alternative of relocating the tailings from the Moab site to either site north of their current site is just such a sound investment.

White Mesa IUC Mill Site is unsuitable

Of the three off-site locations considered, the White Mesa site is the greatest distance from the Moab site and would require moving the tailings out of Grand County, either by truck via the already congested main street of Moab, or by slurry pipeline. Construction of the two buried pipelines, 89 miles long, under the Colorado River and across varied and undulating ground, and of pump stations and other necessary infrastructure, would cause both unacceptable environmental impacts and a long delay

in actually moving the tailings. The following paragraph displays additional disadvantages of the slurry transportation mode.

The presence of archeological and other cultural sites at White Mesa as well as proximity of minority and low-income populations—an environmental justice concern, also make the site a poor choice. According to Sarah M. Fields in a June 2004 report on White Mesa, the IUC plant is located on the White Mesa Archeological District, which was found eligible for--tho' not officially listed on, the National Register of Historic Places. The Ute Mountain Ute, Southern Ute, and Northern Ute Tribes all oppose moving the tailings to White Mesa.

Slurry Pipeline and Truck transportation modes are unacceptable

As noted in most of the *figures* in the Summary Draft EIS, both slurry and truck are worse alternatives than rail.

Slurry exceeds truck and rail in Annual Withdrawals of Colorado River Water (*Fig. S-4*); Maximum Land Disturbance (*Fig. S-5*); Maximum Number of Potentially Affected Cultural Resources (*Fig. S-6*); Minimum Number of Potentially Affected Traditional Cultural Properties (*Fig. S-7*); Power Requirements (*Fig. S-8*); and Total Nonpotable Water Consumption (*Fig. S-11*);

Truck exceeds rail in Total Fuel Consumption (*Fig. S-9*); Daily Potable Water Consumption (*Fig. S-10*); Total Nonpotable Water Consumption (*Fig. S-11*); Sanitary Waste Generation (*Fig. S-12*); Generation of New Direct and Indirect Jobs (*I.e.,* would require more labor) (*Fig. S-15*); Latent Cancer Fatalities Among Workers (*Fig. S-16*); Nonradiological Transportation Fatalities (*Fig. S-19*); Increase in Truck Traffic on US-191 (*Fig. S-21*); and Increase in Moab Traffic from Commuters (*Fig. S-22*). While both truck and rail would generate more dust than slurry, it is clear that DOE has developed a great deal of experience in its reclamation of 22 UMTRCA sites, and is capable of dealing with all construction and operational phases with a minimum of exposure by workers and the public in general.

It is recognized that trucking will be necessary as an adjunct to rail, to move all of the material in the vicinity properties to the Moab site, for example, as well as to move mill parts and other debris which cannot be loaded into railcars. Trucks will also to used between rail sidings and disposal cells. One further point--since some borrow materials may be moved by truck, it is best to use borrow areas which minimize the need for use of US-191.

Klondike Flats site has drawbacks

1) Interference with Recreation, especially during construction and operation of the disposal cell:

Klondike Flats is just north of the Canyonlands Field Airport and north of the Blue Hills Road, which has heavy recreational use. Hikers, campers, mountain bikers and off-highway vehicles use the area during most of the year. It is estimated that 53,000 recreational use visits occurred in 2002. The Blue Hills Road is also used to access a track used by motorcycles and ATVs, especially in the spring and fall, an estimated 1,000 user days per year. Construction of a new public access road and overpass and movement of the tailings and other materials would create dust, noise and vibration

which would severely affect recreation and airport employees and users.

By contrast, the Crescent Flats site at Crescent Junction has little if any recreational use.

2) Restricts room for growth, for airport expansion, and other future needs:

Klondike Flats is only 18 miles from the fast-growing Moab and Spanish Valley areas. While the site itself is on BLM administered lands, there are properties within the northern corridor which are privately owned or are administered by the State of Utah School & Institutional Trust Lands Administration (SITLA). SITLA is mandated to maximize the value of its holdings to enhance revenues for public education. The corridor could provide for economic assets such as gas stations, motels and campgrounds which serve visitors.

The Crescent Flats site is near only to Crescent Junction, whose only industry--a gas station, appears to be closed. Neither Crescent Junction nor the small settlement of Thompson Springs, 6 miles away, contain significant population centers; neither is expected to grow in the future.

3) Proximity to National Parks

Klondike Flats is close to Arches National Park. As shown in *figures 4-10* and *4-11*, on pages 4-79 and 4-80 of Volume I, the disposal cell would be potentially visible from this much visited park. The increased truck traffic and impacts of construction of overpasses and access roads could decrease visitors' appreciation of the area over the many years required for this project.

While the Crescent Junction disposal cell site would be somewhat more visible, it would be most apparent from the I-70 scenic overlook.

Other comparisons of Klondike Flats and Crescent Junction

In many regards, Table 2-32 Summary and Comparison of Impacts shows few if any differences in impacts between the two sites including: Geology and Soils, Air Quality, Surface Water, Floodplains and Wetlands, Aquatic Ecology, Noise and Vibration, Traffic, and Environmental Justice.

In terms of Ground Water, the table shows that "Additional contamination from the ammonia salt layer could reach ground water within 1,100 years and could continue until 1,540 years from the present, even after completion of ground water remediation" if materials are stored on-site. Travel time at Klondike Flats to underlying ground water would be 25,000 years, and at Crescent Junction 170,000 years.

In terms of Terrestrial Ecology and Land Use, differences were projected in the number of acres disturbed for transportation infrastructure and total acres of short-term land disturbance. Whether moved by truck or rail, there would be more such disturbance at Klondike Flats than at Crescent Junction.

More Cultural Sites would be adversely affected at Klondike Flats—15 to 32, versus estimates at Crescent Junction where 4 to 11 would be affected.

Costs at Crescent Junction would be somewhat higher than at Klondike Flats. On the other hand, benefits in terms of Annual Output of Goods and Services and Annual Labor Earnings would also be higher at Crescent Junction.

A further advantage of Crescent Junction is that the site contains more of the borrow materials which would be needed. Thus, the maximum *increase* in average annual daily truck traffic on US-191 from shipping borrow materials would be 16% for Klondike Flats compared to only 6% for Crescent Junction. The 6% at Crescent Junction is even lower than the 10% which would be incurred with on-site disposal.

The Summary Tables show no discernable differences between the two sites, if materials are moved by rail, in Annual Withdrawals of Colorado River Water (*Fig. S-4*); Maximum Land Disturbance (*Fig. S-5*); Power Requirements (*Fog. S-8*); Daily Potable Water Consumption (*Fig. S-10*); Total Nonpotable Water Consumption (*Fig. S-11*); Sanitary Water Generation (*Fig. S-12*); Annual Generation of Residual Radioactive Material and Solid Waste (*Fig. S-13*); Annual Costs and Benefits (*Fig. S-14*); Latent Cancer Fatalities Among Workers (*Fig. S-16*); Public Latent Cancer Fatalities (at the Moab Site)(*Fig. S-17*); Public Latent Cancer Fatalities from Vicinity Property Exposure (*Fig. S-18*); Increase in Truck Traffic in Downtown Moab (*Fig. S-20*); and in Borrow Material Requirements (*Fig. S-24*).

The Klondike Flats site has more adverse impacts in the following: Maximum Number of Potentially Affected Cultural Resources (*Fig. S-6*); Generation of New Direct and Indirect Jobs (*Fig. S-15*); and Increase in Truck Traffic on US-191 (*Fig. S-21*).

The Crescent Junction site has more adverse impacts in: Total Fuel Consumption (*Fig. S-9*); Nonradiological Transportation Fatalities (*Fig. S-19*); and Increase in Moab Traffic from Commuters (if materials are moved by truck) (*Fig. S-21*). It should be noted that all of these impacts are due to the fact that it is further than Klondike Flats from the Moab site. Indeed, this very isolation of the Crescent Junction site is a major advantage.

There is one factor that affects Crescent Junction but not the Klondike Flats site, and that is the possible construction and operation of the Williams Petroleum Pipeline Terminal on fenced 50-acres within a 65-acre site adjacent to the Crescent Flats acreage. (See *Fig. 2-24*, page 2-55 of Volume I.) This aboveground and underground facility would include storage tanks, a truck-loading rack, vapor combustion system, electrical substation, offices and warehouse buildings. It would be served largely by truck traffic. Approved by BLM in 2001, the project has been delayed by litigation. If the Williams timeframe coincides with that of DOE's Remediation of the Moab Uranium Mill Tailings, cumulative impacts will have to be taken into account in developing the remedial action plan. The Williams project would not disqualify the Crescent Junction site.

If the Williams facility is actually built, it will be much more prominent and visible from both I-70 and US-191 than will the finished disposal cell and site.

CONCLUSIONS

On page S-11 of the Draft EIS, it states: "DOE intends to consider the results of the analysis provided in this draft EIS, the relative costs among the alternatives, and other factors, such as public and agency comments on this draft EIS (including the views of cooperating agencies), in determining its preferred alternative for the disposal cell location and remediation of vicinity properties." (Emphasis mine) In addition, the National Academy of Sciences made it clear that consideration of long-term impacts should help guide the eventual remediation decision.

We have looked at the same three considerations. While we are unable to

gauge the validity of technical requirements and of conceptual and analytical models--such as cost modeling, we applaud the DOE for its widespread release of the Draft EIS and sufficient comment period, for recognizing differences in interpretation by reviewers, and for its efforts to include the public in scoping and informational meetings. However, we find the analysis of costs presented in the Summary document to be incomplete and misleading. Indeed, the consequences of uncertainties/assumptions imply that the risks of on-site disposal of the tailings could result in extremely high costs--in more than federal dollars. In terms of "other factors," we implore you to give priority consideration to the many members of the public and the many agencies and organizations which urge you to MOVE THE TAILINGS.

Thank you for your attention. I would like to receive a copy of the Final Environmental Impact Statement on the Remediation of the Moab Uranium Mill Tailings in the mail.

Jean Binyon (for the Utah Chapter Sierra Club)
3057 East Coyote Court
Moab, UT 84532

E-mail: binyon@binyon.us

Document #378 lhart Individual

From: lhart578@aol.com
Sent: Sunday, February 13, 2005 12:15 PM
To: moabcomments
Subject: Colorado Water Ways
Deptment of Energy:
Comments on Proposed Clean up:

As the representative for the Women's Chamber of Commerce Community Safety Committee I am writing this note to see what we can do to support your efforts

Water has been concern that has been put on the shelf far too long.

I **have a few questions, and based on those anwers the "Women's Chamber of Commerce" would like to provide a serioes of Community Forums and informational workshops.**

1. Will moving the uranium tailings pile secure safe drinking water?

2. What is the preferred site to move this waste?

3. Can this waste be used for other sources if recycled?

4. What is the cost of this move if Las Vegas is selected as the location for pilings?

5. Are other waterways endangered by similar situations?

6. What has been done to prohibit coal waste dumping in American water ways?

7. How does a family protect themselves from cancerous waters?

8. Does boiling rid the water of all dangerous agents in water?

9. Is there a way to disolve this waste without endangering the air quality?

10. Will the costs of this relocation be paid by the EPA?

TEMPORARY SOLUTION

- **Motivate community of safe water practices**
- **Band Coal waste dumping in ALL water ways**
- **Develop alternative source of water development**
- **Develop a community based action committee, members made up of:**

Community organizations
Water Autorities
Chemical Specialists/Scientists
Engineers
Energy Specialists
Local Counties endangered